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EXAMINER

KHOSRAVAN, JIMAN

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/655,195

Applicant(s)

EGLIT, ALEXANDER JULIAN

Examiner

Jiman Khosravan

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-136 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 136 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.5
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-136 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-81 of copending Application No. 09/654,822. Although the conflicting claims are not identical, they are not patentably distinct from each other because this application contains the combination of search with some mention of alert criteria and application 09/654,822 contains the combination of search and alert criteria. Both applications contain client queries inputted by the client, matching queries against extracted terms received from information streams, storing results and providing

query results. Furthermore, they both contain methods for filtering the information packets, storing the information packets with a packet identifier and a data structure which houses the extracted terms and the results regarding the number of matching extracted terms. Finally, they both match alert criteria and generate alerts to the user.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-136 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 09/654,801. Although the conflicting claims are not identical, they are not patentably distinct from each other because this application contains the combination of search with some mention of alert criteria and application 09/654,801 contains the combination of search and alert criteria. Both applications contain client queries inputted by the client, matching queries against extracted terms received from information streams, storing results and providing query results. Furthermore, they both contain methods determining whether to issue and alert the user of client systems. Also, both receive the same type of content from the same type of sources that comprise the information streams.

Finally, they both employ the same matching strategies and search techniques extract and match extracted terms from the information stream.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Drawings*

4. The drawings are objected to because Figures 1, 4, and 6 are not fully illustrated, as the submissions of the Figures are partial. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

5. The abstract of the disclosure is objected to because it contains legal terminology throughout, i.e. "said method and system" on line 3. Correction is required. See MPEP § 608.01(b).

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the

abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

7. The disclosure is objected to because it does not contain a brief summary of the invention.

Appropriate corrections are required.

### *Claim Objections*

8. Claim 19 is objected to because of the following informalities:

typographical error, "fo" should be changed to "of." Appropriate correction is required.

9. Claim 52 is objected to because of the following informalities:

typographical error, "fo" should be changed to "of." Appropriate correction is required.

10. Claim 83 is objected to because of the following informalities:

typographical error, "fo" should be changed to "of." Appropriate correction is required.

11. Claim 122 is objected to because of the following informalities:  
typographical error, “fo” should be changed to “of.” Appropriate correction is required.

***Claim Rejections ~ 35 U.S.C. § 112***

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 16, 49, 67, and 121, recite the limitation "said terms index data structure," and “said terms inverted file” in lines 4-5, and lines 8-9, respectively. There is insufficient antecedent basis for this limitation in the claim.

14. Claims 18, 51, and 82, recite the limitation “said term in said terms hash table and said terms in inverted file” in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

15. Claims 17, 50, and 81 recites the limitation “said terms in inverted file” in line 3. There is insufficient antecedent basis for this limitation in the claim.

16. Claims 13, 46, 77, and 106 recites “The method of step 10” in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections ~ 35 U.S.C. § 102***

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

18. Claims 1-4, 8-11, 19-21, 27-31, 34-37, 41-44, 52-54, 60-64, 67-68, 72-73, 83-85, 91-95, 98-99, 101-102, 108-109, 113-116, 122-124, and 130-134, are rejected under 35 U.S.C. 102(e) as being anticipated by Eichstaedt et al. (US 6,381,594).

a) As per claims 1, 34, and 98, Eichstaedt teaches method for real time search, where the method comprising the steps of receiving a client query from a client system (Col. 3, lines 63-67; Col. 4, lines 1-9; Col. 5, lines 22-25), the client



query regards a content of at least one information packet, matching at least a portion of the client query against at least a portion of a plurality of extracted terms to generate a query result (Col. 4, lines 38-47), where the extracted terms being extracted out of a plurality of information packets, where information packets either provided by a plurality of information sources or representative of a portion of a received signal provided from a plurality of information sources (Col. 3, lines 30-55), where the extracted terms are stored in a storage means (Col. 3, lines 14-15), and the storage means is configured to allow fast insertion and fast deletion of content (Col. 11, lines 32-57) and providing a query result to the client system (Col. 4, lines 53-55).

b) As per claims 2, 35, and 99, Eichstaedt teaches the invention as described above and further teaches wherein the storage means further stores information representative of a reception of extracted terms (Col. 3, lines 14-15).

c) As per claims 3, 36, 109, and 114, Eichstaedt teaches the invention as described above and further teaches wherein the storage means further allows timely deletions of irrelevant or time-decayed terms and query-terms (Col. 1, line 67; Col. 2, lines 1-4; Col. 11, lines 32-57).

d) As per claims 4, 37, 68, and 101, Eichstaedt teaches the invention as described above and further teaches wherein the storage means is a term index data structure (Col. 11, lines 32-57).

e) As per claims 8, 41, 72, and 113, Eichstaedt teaches the invention as described above and further teaches wherein a reception of an information packet is followed by the steps of storing the information packet with an associated packet identifier in the storage means, storing extracted term information representative of a reception of at least one extracted term at the storage means, at least one extracted terms extracted from the information packet, and linking between the stored information packet and the extracted term information (Col. 3, lines 6-16; Col. 4, lines 38-47; Col. 9, lines 37-51; Figures 2, 3, 5, and 6).

f) As per claims 9, 42, and 73, Eichstaedt teaches the invention as described above and further teaches wherein a deletion of an information packet is followed by a step of deleting the linked extracted term information Col. 11, lines 32-57: When the terms are deleted, all information and data is deleted as well).

g) As per claims 10, 43, and 115, Eichstaedt teaches the invention as described above and further teaches wherein the information packets are stored in a messages hash, and wherein the linked extracted term information is stored in a terms hash (Figures 5 and 6; Col. 8, lines 12-67).

h) As per claims 11, 44, and 116, Eichstaedt teaches the claimed invention as described above and further teaches wherein the extracted term information comprising of at least one information field selected from a group consisting of a last modification time field, indicating a most recent time of reception of the extracted term, during a predetermine period of time, a number of channels containing term, indicating a number of information sources that provided the extracted term during a predetermine period of time, a total instances field, indicating a total amount of receptions of the extracted term during a predetermine period of time; and a terms inverted entries map, comprising of a plurality of terms inverted file entries, each entry holding information representative of a reception of the extracted term from a single information source during a predetermined period of time (Figure 6, item 626; Col. 9, lines 42-44: Match column contains the total number of items the extracted term was found).

i) As per claims 19, 52, 83, and 122, Eichstaedt teaches the claimed invention as described above and further teaches storing alert criteria, and wherein the step of matching further comprises a step of matching alert criteria received and processed in the past against newly received terms to generate an alert (Figures 2, 3, 5, and 7; Col. 5, lines 45-50; Col. 6, lines 10-36).

j) As per claims 20, 53, 84, and 123, Eichstaedt teaches the claimed invention as described above and further teaches comprising a step of matching the client query against historical archives of informational content to generate an archive query result (Figures 2 and 4; Col. 4, lines 48-55; Col. 5, lines 45-50).

k) As per claims 21, 54, 85, and 124, Eichstaedt teaches the claimed invention as described above and further teaches matching the client query against the historical archives of informational content is followed by a step of processing the archive query result and a result of the step of matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate the query result (Col. 4, lines 59-60: Results are stored for later retrieval by the user after searching is performed on live information stream or previously stored information).

l) As per claims 27, 60, 91, and 130, Eichstaedt teaches the claimed invention as described above and further teaches wherein an information source is selected from a group consisting of data network providers, chat channels providers, news providers, and music providers (Col. 3, lines 30-54).

m) As per claims 28, 61, 92, and 131, Eichstaedt teaches the claimed invention as described above and further teaches wherein information packets

comprise of content selected from a group of text, audio, video, multimedia, and executable code streaming media (Col. 3, lines 30-54).

n) As per claims 29, 62, 93, and 132, Eichstaedt teaches the claimed invention as described above and further teaches wherein the step of matching further involves a step of computing a similarity between a client query and a group of at least one information packet (Col. 4, lines 38-47).

o) As per claims 30, 63, 94, and 133, Eichstaedt teaches the claimed invention as described above and further teaches wherein the group of at least one information packet comprising of at least one information packet received from a single information source (Col. 4, lines 38-47: The search processor inherently separates each stream while it checks them in order to determine the source of the matching information).

p) As per claims 31, 64, 95, and 134, Eichstaedt teaches the claimed invention as described above and further teaches wherein the similarity reflects at least one parameter selected from a group consisting of a total amounts of extracted terms being received from at least one information source during a predefined time interval, a number of relevant extracted terms being received from at least one information source during the predefined time interval, a total number of information sources being searched during the predefined time interval, an

elapsed time since a last appearance of a relevant extracted term from an information source during the predefined time interval, a position of relevant extracted terms in at least one information source, extracted term in proximity to a relevant extracted term, a part of speech of a relevant extracted term, and a relevant extracted term frequency and importance in a language of the information source (Col. 4, lines 38-47: The search processor inherently separates each stream while it checks them in order to determine the source of the matching information; Col. 9, lines 30-57: Match column contains the total number of times the extracted term was found).

q) As per claim 108, Eichstaedt teaches the claimed invention as described above and further teaches wherein high update storage means allows fast insertion and deletion of content (Col. 11, lines 32-57).

r) As per claim 67, it has the same claim limitations as of claims 1, 2, and 8, and therefore is rejected under the same rationale.

s) As per claim 102, it has the same claim limitations as of claims 2 and 4, and therefore is rejected under the same rationale.

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 16-18, 49-51, 80-82, and 121, are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichstaedt, and further in view of *Ounis, I.; Pasca, M.*; Database Engineering and Applications Symposium, 1997. IDEAS '97. Proceedings., International , 25-27 Aug. 1997, Pages: 397 – 402, hereafter referred to as Ounis.

a) As per claims 16, 49, 80, and 121, Eichstaedt teaches the invention as described above and further teaches wherein the step of deleting further comprising of the steps of receiving an information packet identification, whereas the terms extracted from the information packets are to be deleted, reading the information packet identification from the messages hash table in the terms index data structure, and obtaining relevant entries of said extracted terms belonging to said information packet in said messages data (Col. 11, lines 32-57: Eichstaedt teaches a tree structure and linked list where the elements are deleted. Eichstaedt further teaches hash tables containing the data to be deleted). However, Eichstaedt does not explicitly teach using an inverted file system to organize the database by accessing the terms inverted file for each said terms entry pointed to the terms inverted file.

Ounis teaches and an indexing system which uses the inverted file system.

By implementing the inverted file system of Ounis in the search engine system of Eichstaedt, Eichstaedt would have been able to enhance the way his system accessed the information in the database.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ounis in the system of Eichstaedt because by implementing the specification as described above, the inverted file system technique would have allowed faster processing, retrieval, and dissemination of data to the users (Ounis: Page 397, Col. 1).

b) As per claims 17, 50, and 81, Eichstaedt-Ounis teaches the claimed invention as described above and further teaches decreasing a value of said total instances by a value of said instances number for each of the terms entry pointed to in the terms inverted file (Eichstaedt : Col. 11, lines 32-57; Figure 6: Evalcounter).

c) As per claim 18, 51, 82, Eichstaedt-Ounis teaches the claimed invention as described above and further teaches wherein the step of deleting further comprising a step of deleting an extracted term by a garbage collection process and canceling a link between the term in the terms hash table and the terms in the inverted file (Col. 11, lines 32-57: Eichstaedt deletes the objects in the tree index structure and deletes the links in the linked list structure).



21. Claims 5-7, 12-15, 38-40, 45-48, 69-71, 74-79, 103-107, 110-112, and 117-120, are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichstaedt, and further in view of Diamond (US 6,269,368).

a) As per claims 14, 47, 78, and 119, Eichstaedt teaches the invention as described above and further teaches wherein the step of matching is preceded by inserting an extracted term into a terms hash table, , to a terms entry map, inserting information packet data in a messages hash table, inserting the extracted term from the information packet to a messages data table, increasing a value of instances in the messages data table by one, and updating a value of information source identification in the message data table (Figures 2, 5, 6; Col. 4, lines 38-47; Col. 9, lines 37-51; Col. 11; lines 37-52). However, Eichstaedt does not explicitly teach using a terms inverted file system to organize the queries, inserting an information source identification, where the information source provided the extracted term.

Diamond teaches and an indexing system that uses a two-tiered inverted file system to store the indexed terms (Col. 10, lines 27-39). Diamond further adds information source identification to the information packets and stores it (Col. 10, lines 11-39).

By implementing the inverted file system of Diamond that also stores source identification data in the system of Eichstaedt, Eichstaedt would have been able to

provide an efficient well-known technique for searching queries and storing meaningful and informative query results.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Diamond in the system of Eichstaedt because by implementing the specification as described above, Eichstaedt's system can further filter through relevant documents the user deemed more appropriate for their search making it a better query result (Diamond: Col. 8, lines 23-28).

b) As per claims 15, 48, 79, and 120, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches increasing a value of total instances in the terms inverted file, updating a value of last modification time in the terms inverted file, increasing a value of instances number in the inverted entry map table associated with the information source identification in the terms inverted file, and updating a value of message time in said messages data table (Diamond: Col. 10, lines 13-19 & lines 32-34).

c) As per claims 5, 38, 69, and 110, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches the step of matching is preceded by adding control data to the information packets, filtering the plurality of information packets, processing the extracted terms by adding control

information to the extracted terms, filtering the extracted terms to generate filtered extracted terms, and storing an extracted term in a term index data structure (Diamond: Col. 1, lines 21-36; Col. 10, lines 40-49; Col. 10, lines 13-19 & lines 32-34: The terms are parsed, stemmed and filtered to remove certain words).

d) As per claims 6, 40, 71, and 112, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches the control data comprising of information packet identification, information source identification and time of arrival (Diamond: Col. 10, lines 12-34).

e) As per claim 7, 39, 70, 111, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein the extracted terms are extracted out of the plurality of information packets by parsing and stemming the plurality of information packets; and wherein the step of filtering further comprises a step selected from a group consisting of discarding the terms constructed of one-letter words, discarding the terms constructed of frequently used words, discarding said terms constructed of stop-words, and discarding the terms constructed of predefined words (Diamond: Col. 1, lines 21-3; Col. 10, lines 40-49: The terms are parsed, stemmed, and filtered to remove certain stop-words and various other critical words and phrases).

f) As per claims 12, 45, and 117, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein each inverted file entry comprising of at least one field selected from a group consisting of a channel identifier, for identifying the information source that provided the extracted term during a predetermined period of time, instances number, for indicating a total amount of receptions of the extracted term from an information source during a predetermine period of time; and time of last appearance, for indicating a most recent time of reception of the extracted term from an information source during a predetermine period of time (Figure 6, item 626; Col. 9, lines 42-44: Match column contains the total number of items the extracted term was found).

g) As per claims 13, 46, and 118, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein each information packet is further associated to a message terms key map, the message key map comprising of a plurality of message characteristic entries, each message characteristic entry associated to an extracted term being extracted from the information packet, said message characteristic entry comprising of at least one of the following fields selected from a group consisting of a term inverted file, for pointing to the term extracted information, an instance of number, for indicating a number of time said extracted term appeared in the information packet, and an inverted file entry, for

pointing to a terms inverted file entry (Figure 6, item 626; Col. 9, lines 42-44:

Match column contains the total number of items the extracted term was found).

h) As per claim 74, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein the information packets are stored in a messages hash, and wherein the linked extracted term information is stored in a terms hash (Eichstaedt: Figures 5 and 6; Col. 8, lines 12-67).

i) As per claim 75, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein the extracted term information comprising of at least one information field selected from a group consisting of a last modification time field, indicating a most recent time of reception of the extracted term, during a predetermine period of time, a number of channels containing term, indicating a number of information sources that provided the extracted term during a predetermine period of time, a total instances field, indicating a total amount of receptions of the extracted term during a predetermine period of time; and a terms inverted entries map, comprising of a plurality of terms inverted file entries, each entry holding information representative of a reception of the extracted term from a single information source during a predetermined period of time (Figure 6, item 626; Col. 9, lines 42-44: Match column contains the total number of items the extracted term was found).

j) As per claim 76, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein each inverted file entry comprising of at least one field selected from a group consisting of a channel identifier, for identifying the information source that provided the extracted term during a predetermined period of time, instances number, for indicating a total amount of receptions of the extracted term from an information source during a predetermine period of time; and time of last appearance, for indicating a most recent time of reception of the extracted term from an information source during a predetermine period of time (Figure 6, item 626; Col. 9, lines 42-44: Match column contains the total number of items the extracted term was found).

k) As per claim 77, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein each information packet is further associated to a message terms key map, the message key map comprising of a plurality of message characteristic entries, each message characteristic entry associated to an extracted term being extracted from the information packet, said message characteristic entry comprising of at least one of the following fields selected from a group consisting of a term inverted file, for pointing to the term extracted information, an instance of number, for indicating a number of time said extracted term appeared in the information packet, and an inverted file entry, for

pointing to a terms inverted file entry (Figure 6, item 626; Col. 9, lines 42-44:

Match column contains the total number of items the extracted term was found).

1) As per claims 103, Eichstaedt teaches the invention as described above and further teaches wherein the step of matching is preceded by inserting an extracted term into a terms hash table, , to a terms entry map, inserting information packet data in a messages hash table, inserting the extracted term from the information packet to a messages data table, increasing a value of instances in the messages data table by one, and updating a value of information source identification in the message data table (Figures 2, 5, 6; Col. 4, lines 38-47; Col. 9, lines 37-51; Col. 11; lines 37-52). However, Eichstaedt does not explicitly teach using a terms inverted file system to organize the queries, inserting an information source identification, where the information source provided the extracted term.

Diamond teaches and an indexing system that uses a two-tiered inverted file system to store the indexed terms (Col. 10, lines 27-39). Diamond further adds information source identification to the information packets and stores it (Col. 10, lines 11-39).

By implementing the inverted file system of Diamond that also stores source identification data in the system of Eichstaedt, Eichstaedt would have been able to

provide an efficient well-known technique for searching queries and storing meaningful and informative query results.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Diamond in the system of Eichstaedt because by implementing the specification as described above, Eichstaedt's system can further filter through relevant documents the user deemed more appropriate for their search making it a better query result (Diamond: Col. 8, lines 23-28).

m) As per claim 104, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein the extracted term information comprising of at least one information field selected from a group consisting of a last modification time field, indicating a most recent time of reception of the extracted term, during a predetermine period of time, a number of channels containing term, indicating a number of information sources that provided the extracted term during a predetermine period of time, a total instances field, indicating a total amount of receptions of the extracted term during a predetermine period of time; and a terms inverted entries map, comprising of a plurality of terms inverted file entries, each entry holding information representative of a reception of the extracted term from a single information source during a predetermined period



of time (Eichstaedt: Figure 6, item 626; Col. 9, lines 42-44: Match column contains the total number of items the extracted term was found).

n) As per claim 105, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches the control data comprising of information packet identification, information source identification and time of arrival (Diamond: Col. 10, lines 12-34).

o) As per claim 106, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein each information packet is further associated to a message terms key map, the message key map comprising of a plurality of message characteristic entries, each message characteristic entry associated to an extracted term being extracted from the information packet, said message characteristic entry comprising of at least one of the following fields selected from a group consisting of a term inverted file, for pointing to the term extracted information, an instance of number, for indicating a number of time said extracted term appeared in the information packet, and an inverted file entry, for pointing to a terms inverted file entry (Figure 6, item 626; Col. 9, lines 42-44: Match column contains the total number of items the extracted term was found).

p) As per claim 107, Eichstaedt-Diamond teaches the claimed invention as described above and further teaches wherein each inverted file entry comprising of

at least one field selected from a group consisting of a channel identifier, for identifying the information source that provided the extracted term during a predetermined period of time, instances number, for indicating a total amount of receptions of the extracted term from an information source during a predetermine period of time; and time of last appearance, for indicating a most recent time of reception of the extracted term from an information source during a predetermine period of time (Figure 6, item 626; Col. 9, lines 42-44: Match column contains the total number of items the extracted term was found).

22. Claims 22-26, 55-59, 86-90, 100, and 125-129, are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichstaedt, and further in view of Chidlovskii et al. (US 6,327,590).

a) As per claims 22, 55, 86, and 125, Eichstaedt teaches the invention as described above. However, Eichstaedt does not teach matching the client query against a semi-static database of the informational content and having a low incidence of changing to generate a semi static query result.

Chidlovskii teaches matching client queries against a collection of documents, static query results, and recent query results (Chidlovskii: Figure 2;

Col. 4, lines 55-67; Col. 5, lines 1-8: Document collection contains a semi-static collection of searchable documents and results from other users).

By implementing the semi-static database search engine system of Chidlovskii in the system of Eichstaedt, Eichstaedt would have been able to expand the scope of locations that the search processor searches for relevant documents and information with which to deliver to the user.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chidlovskii in the system of Eichstaedt because by implementing the specification as described above, Eichstaedt's system can further search through more relevant documents the user has deemed more appropriate for their search by allowing the user to rank in a hierarchical manner, specific data (Chidlovskii: Col. 2, lines 65-67; Col. 3, lines 1-7).

b) As per claims 23, 56, 87, and 126, Eichstaedt-Chidlovskii teaches the invention as described above and further teaches matching the client query against the semi-static database is followed by a step of processing the semi static query result and a result of the step of matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate the query result (Chidlovskii: Figure 2; Col. 4, lines 55-67; Col. 5, lines 1-8).

c) As per claims 24, 57, 88, and 127, Eichstaedt-Chidlovskii teaches the invention as described above and further teaches ranking information sources according to a similarity between at least a portion of information packets provided by said information sources and between the client query (Chidlovskii: Col. 2, lines 65-67; Col. 3, lines 1-6: Ranks the information sources according to context of the search query: number of matching terms in query and result).

d) As per claims 25, 58, 89, and 128, Eichstaedt-Chidlovskii teaches the invention as described above and further teaches creating a list of ranked information sources, the list forms a part of the query result (Chidlovskii: Col. 8, lines 39-42: Search result return is in the form of a ranked list).

e) As per claims 26, 59, 90, and 129, Eichstaedt-Chidlovskii teaches the invention as described above and further teaches ranking is based upon a parameter selected from a group consisting of a total amount of extracted terms provided by an information source in a predefined time interval, an elapsed time since the extracted term was provided by the information source in said predefined time interval, and an extracted term position in the information source (Chidlovskii: Col. 8, 39-50: One type of ranking is based upon the user query profile and the term-weight vector; term position).

f) As per claim 100, it is the same claim limitations as of claims 2, 7, and 20-23, and are therefore rejected under the same rationale.

23. Claims 32-33, 65-66, 96-97, and 135-136, are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichstaedt, and further in view of Fox et al. (US 6,574,632).

a) As per claims 32, 65, 96, and 135, Eichstaedt teaches the claimed invention as described above and further teaches wherein the step of matching implements a matching technique consists of Boolean based matching (Col. 5, lines 24-26). However, Eichstaedt does not explicitly teach probabilistic matching, fuzzy matching, proximity matching, and vector based matching.

Fox teaches complex matching techniques including: probabilistic matching, fuzzy matching, proximity matching, and vector based matching (Fox: Col. 3, lines 29-37; Col. 6, lines 38-56: Retrieval strategies: Boolean, probabilistic, fuzzy, vector, and other complex matching strategies).

By implementing the numerous matching techniques of Fox in the search engine system of Eichstaedt, Eichstaedt would have been able to provide more accurate and reliable query results.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fox in the system of Eichstaedt because by implementing the specification as described above, the users of Eichstaedt's system can now access the same retrieval system through multiple precisions algorithms giving the user more options and more control of the system (Fox: Col. 3, lines 36-50).

b) As per claims 33, 66, 97, and 136, Eichstaedt teaches the claimed invention as described above and further teaches complex matching techniques (Fox: Col. 3, lines 29-37; Col. 6, lines 38-56).

### ***Conclusion***

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiman Khosravan whose telephone number is (703) 305-0704. The examiner can normally be reached on Monday - Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax

phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Communication via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [rupal.dharia@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Jiman Khosravan  
Examiner  
Art Unit 2141



March 19, 2004



**RUPAL DHARIA**  
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